

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: **Kazunori KUSANO**

Art Unit: **3732**

Application Number: **10/527,338**

Examiner: **Sunil K. Singh**

Filed: **March 10, 2005**

Confirmation Number: **3526**

For: **KIT FOR DIAGNOSING PULP EXPOSURE AND A PROBE SYRINGE**

Attorney Docket Number: **082407**

Customer Number: **38834**

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

December 9, 2010

REMARKS

Claims 1-10 are pending in the present application. Claims 1-10, which form the basis of this pre-appeal brief are rejected under 35 U.S.C. §103(a). Claims 1, 3, 4 and 6-10 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kusano (U.S. Patent No. 6,508,647) in view of Gleave et al. (U.S. Patent No. 4,105,715). Claims 2 and 5 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kusano in view of Gleave and Caizza (U.S. Patent No. 5,964,737).

The issues presented for review are:

1. Whether the Examiner gave proper weight to the Declaration dated May 11, 2010 by Dr. Kazunori KUSANO.
2. Whether it would have been obvious to combine the paste of Gleave et al. (U.S. Patent No. 4,105,715) with the structure of Kusano (U.S. Patent No. 6,508,647).

First, Applicant discusses whether the Examiner gave proper weight to the Declaration dated May 11, 2010 by Dr. Kazunori Kusano. As noted in the Declaration dated May 11, 2010, if a cyanoacrylate monomer is used as a dental paste, this is highly disadvantageous, because

cyanoacrylate polymerizes when it comes in contact with water. However, the Office Action dated July 15, 2010 dismissed the Declaration as “mere statements and not supported by any experimental results.” In response, Applicant respectfully submits that this comment is an improper treatment of the Declaration. Unlike arguments of counsel, statements in a Declaration are factual evidence supported by a sworn statement. The significance of such evidence has been recognized by the Federal Circuit:

After a prima facie case of obviousness has been made and rebuttal evidence submitted, all the evidence must be considered anew.” *In re Eli Lilly & Co.*, 902 F.2d 943, 945 (Fed. Cir. 1990) (citing *In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir. 1984)); *Piasecki*, 745 F.2d at 1472 (“Prima facie obviousness is a legal conclusion, not a fact. Facts established by rebuttal evidence must be evaluated along with the facts on which the earlier conclusion was reached, not against the conclusion itself.” (internal cites omitted)); *see also* MPEP § 716.01(d).

Additionally, the BPAI has repeatedly explained that Declarations are to be considered on the merits and carry greater weight than attorney arguments. For example, *see ex parte Malone*, Appeal 2009-003894, August 27, 2009; *ex parte Rapp*, Appeal No. 2009-002865, August 17, 2009; *ex parte Ramsen*, Appeal No. 2009-002984, December 30, 2009; *ex parte Donnelly*, Appeal No. 2009-014598, January 5, 2010. Additionally, as explained in MPEP 716.01 (B), when evidence such as a Declaration is filed, “[g]eneral statements such as “the declaration lacks technical validity” or “the evidence is not commensurate with the scope of the claims” without an explanation supporting such findings are insufficient.”

The statement in the Office Action dated July 15, 2010 that the Declaration filed on May 11, 2010 is “mere statements and not supported by any experimental results” is a general statement, and there has been no explanation given why the evidence presented is insufficient.

Simply because experimental evidence has not been presented to show that cyanoacrylate polymerizes when it comes in contact with water does not mean that this fact is inaccurate or should be dismissed. Thus, Applicant respectfully submits that the Examiner improperly failed to give weight to the sworn statements of the Declaration dated May 11, 2010, instead choosing to ignore these statements without a proper legal basis.

Next, Applicant discusses whether it would have been obvious to combine the paste of Gleave et al. with the structure of Kusano. It is the position of the Examiner that Kusano discloses the embodiment as claimed, with the exception of teaching (i) that the paste has a viscosity of 0.1 Pa-s to 5 Pa-s, and (ii) that the paste is thixotropic. The Examiner states that (i) would have been obvious, and relies on Gleave to teach (ii).

Gleave is directed at cyanoacrylate adhesive paste compositions. These compositions have thixotropic properties. As explained in the Examples, the composition must include (i) ethyl or methyl cyanoacrylate, and (ii) a filler which is one of polyvinylidene fluoride powder, polycarbonate, and polyethylene. The result is a paste or gel with thixotropic properties.

In response to the previously filed remarks, the Office Action dated July 15, 2010 stated that the rejection "is not using the exact paste but rather the teaching of using a paste having thixotropic properties and the advantages of using a thixotropic paste." However, Applicant respectfully submits that it would not have been obvious to modify the paste of Kusano by adding the thixotropic *property* of the paste of Gleave, as suggested by the Examiner. One simply cannot modify a paste by adding a particular *property*. Rather, one can only modify a paste by adding a compound or compounds. These compounds may in turn confer a particular

property on the paste. If a compound or compounds are added to a paste, the modified paste may or may not exhibit the desired properties, and one or more undesired properties may result.

In Gleave, the thixotropic properties come not from the cyanoacrylate or the filler, but rather from a combination of the two. At column 5, lines 6-10, Gleave explicitly states “it would seem that the interaction between the cyanoacrylate monomer and the filler substance is responsible for producing the thixotropic consistency which is the prime feature of this invention.” Therefore, Applicant respectfully submits that if the paste of Kusano were modified by including (i) only the cyanoacrylate monomer, or (ii) only the filler, the modified paste would not have the thixotropic properties. Rather, in view of the cited art of record, the only possible way to add the thixotropic properties to the paste of Kusano is by including both the cyanoacrylate monomer and the filler. The Examiner has not provided evidence in the art of any alternate additives which would be incorporated into the paste of Kusano to add a thixotropic property.

However, as explained by the Declaration dated May 11, 2010, it would not have been obvious to modify the paste of Kusano by adding the combination of the cyanoacrylate monomer and the filler. This is because dental applications unavoidably include exposure to water, which would cause undesirable premature polymerization of a cyanoacrylate-containing paste.

Additionally, in order to further illustrate the inappropriateness of the proposed modification, Applicant cited the Wikipedia entry for “cyanoacrylate.” As noted, “cyanoacrylate is an acrylic resin which rapidly polymerizes in the presence of water (specifically hydroxide ions), forming long, strong chains, joining the bonded surfaces together.” The fact that

cyanoacrylate polymerizes when it contacts water, a water substrate, or air, is a basic principle which is a bedrock of instant adhesives. Thus, since cyanoacrylate, which is required to obtain the thixotropic properties of Gleave, polymerizes too rapidly to be applied to dental applications where water is present, it would not have been obvious to combine Kusano and Gleave.

In the Advisory Action dated November 3, 2010, the Examiner states that it would have been obvious to modify the paste of Kusano, “since it has been held to be within the genral [*sic*] skill of a worker in the art to select a known material on the basis of its suitability for th eintended [*sic*] use as a matter of obvious design choice.” However, the combination of Kusano and Gleave would be unsuitable for its intended use due to premature polymerization.

Finally, the Examiner states in the Advisory Action that the claims should be amended to recite the specific compound that makes the paste thixotropic. However, this is already recited in claims 3, 6 and 10, neither of which is specifically addressed by the Examiner.

In view of the remarks set forth above, Applicant submits that the rejection is improper. Accordingly, it is respectfully requested that the rejection of the claims be withdrawn and that the present claims pass on to allowance.

Respectfully submitted,
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